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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,642	04/12/2004	Craig R. Horne	3275.06US03	1933

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EXAMINER

HOFFMANN, JOHN M

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/822,642

Applicant(s)

HORNE ET AL.

Examiner

John Hoffmann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20,22-26 and 28-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20,22-26 and 28-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

- The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 42-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 42-43: there is no antecedent basis for "the relative density" nor is there any indication as what the density is relative to.

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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 20 is rejected under 35 U.S.C. 102(e) as being anticipated by Schultz 2002/0056291.

See [0082] of Schultz which discloses putting rare earth elements on an inserted which is then inserted into a glass preform structure.

Claims 24-25: The term "soot" connotes a particles size of about 100 nm – see Kyoto 4664690 (col. 1, lines 15-28). As per [0079] and [0082] – the coating layer is the same thing as the dopant layer is the same thing as a soot layer.

Claims 40-41: The claim does not refer to what has the density, what the density is relative to, nor what sort of density it is. In the prior rejection, the Office interpreted the claim to read on anything in the method having any sort of density including mass, particle distribution and energy. Since applicant has not disputed this interpretation, it is deemed that applicant agrees. Likewise, it is deemed that one would be able to find at least one mass/energy/particle density that is within the claim range relative to one other density at some other location within the process.

Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz 2002/0056291.

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Claims 24-25: In the event that "soot" does not inherently imply sizes no more than 100 nm average, it would have been obvious that the term reasonably suggests sizes of less than 100 nm, because the term "soot" implies very small particles with substantially no smaller limit.

Claim 26 – it would have been obvious to make the coating uniform, because if the coating were uneven, the structures would not be concentric- it would tend to bulge where there is more material than in other locations. [0003] of Schultz teaches the tubes are concentric.

Claims 20, 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz 2002/0056291 in view of Kyoto 4664690.

Kyoto is applied to claims 20 and 24-26 as above but is now included as a formal rejection – just in case the above rejections are technically improper for not formally reciting Kyoto.

But for claim 39: Kyoto is cited to show that OVD is conventional mode for applying a soot coating to a glass member (col. 1, lines 15-42) that entails having the rod in a product stream. It would have been obvious to have it in a reactor or furnace – so as to protect the artisan – and/or protect the process from ambient conditions.

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Claims 20, 28-43 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz 2002/0056291 in view of Kyoto 4664690, Berkey 4684384 and Kobayashi 3957474.

Berkey and Kobayashi are applied to Schultz and Kyoto in the same manner they were previously applied to Hicks – and as Schultz and Kyoto are discussed above.

Namely: It would have been obvious to perform the Schultz layer by using a laser, since such is a known superior method of creating a soot layer – by virtue of no water in the preform.

Claims 31-33, 38 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hicks 4749396 in view of Berkey 4684384 and Kobayashi 3957474.

See the prior Office action for the manner in which the references are applied.

See figures 2 and 3 of Kobayashi which shows that the beam goes along a path that goes between a reactant nozzle and the article made.

Claims 20, 28-43 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hicks 4749396 in view of Miller 4501602, Berkey 4684384 and Kobayashi 3957474.

See how Hicks, Berkey, Miller and Kobayashi were previously applied.

However claim 20 now requires the use of rare earth dopants. However such was already well known – for various reasons. Miller at col. 4, lines 9-17 discloses it is known to use CeO₂ to improve resistance to radiation damage. It would have been

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obvious to use CeO₂ as the Hicks dopant to improve radiation resistance in the Hicks method – or to use any other rare earth for their well known properties.

¶

Response to Arguments

Applicant's arguments filed 30 June 2006 have been fully considered but they are not persuasive.

¶ It is argued that Kobayashi teaches away from the claimed invention because Kobayashi teaches that the laser is directed at the mandrel and not between the reactant inlet and the substrate/insert. This does not appear to be relevant because the claims do not preclude that the laser be directed at the mandrel. Claim 31 states that “the light beam is directed along an optical path between a reactant inlet nozzle and the insert”. The plain reading of the limitation is that there must be an optical path that exists, the path exists at some location between the inlet nozzle and the insert, and the light beam is directed along that path. By looking at the Kobayashi drawings, it is clear that the light beam is directed along a path that goes between the nozzle and the insert. That the Kobayashi beam also goes along paths that are not between the nozzle and the insert is deemed to be not very relevant (if that is what applicant's position is) because applicant's beam also appears to be along portions that do not go between the nozzle and the insert.

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All of the other arguments are moot in light of the new grounds of rejection.

However it is noted Applicant argues that Miller does not each optical fiber preforms.

Examiner disagrees – see the last sentence of the Miller Abstract.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

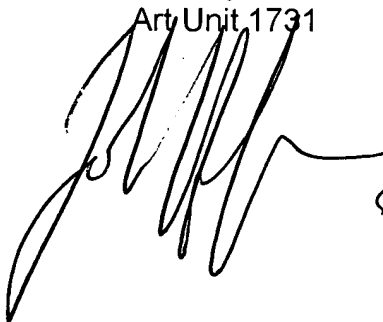
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Hoffmann
Primary Examiner
Art Unit 1731

jmh



8-17-06